Level E
TJ Book
CHECKLIST

- I understand this part of the course =
- I am unsure of this part of the course =
- I do not understand this part of the course =

Name_____Class_____Teacher_____

Level E Course Checklist

Topic 1 - Whole Numbers (Chapter 1)

1. **Place Values** Units, tens, hundreds and thousands etc...	1		
2. **Addition** – Layout important	2		
3. **Subtraction** – Layout important	3		
4. **Divide** by a single digit	4		
5. **Multiplication** by a single digit.	5		
6. **Multiplication** by 10, 100 and 1000 78 x 1000 = 78000 (Add on 3 zeros)	6		
7. **Division** by 10, 100 and 1000 8600 ÷ 100 = 86 (Remove 2 zeros)	7		
8. **Multiplying** by 20, 30 and 500 etc... 83 x 500 = 83 x 100 x 5 = 8300 x 5 etc..	8.		
9. **Division** by 20, 30 and 500 etc.... 4500 ÷ 500 = 4500 ÷ 100 ÷ 5 = 45 ÷ 5 = 9	9		
10. **Rounding** 257 ⇨ 300 to nearest hundred	10.		

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Level E Course Checklist

Topic 2 – Decimal Numbers (Chapter 2)

1. **Working with decimals**

2. **Decimal scales**
   Work out what 1 interval means

3. **Rounding to 1 decimal place**
   2.357 ⇨   2.4   to 1 decimal place

4. **Addition** - Layout important

5. **Subtraction** – Layout important

6. **Divide** by a single digit

7. **Multiplication** by a single digit.

8. **Multiplication** by 10, 100 and 1000
   3.56   x 100 = 356 (move point to the right 2 places)

9. **Division** by 10, 100 and 1000
   7.38÷ 1000 = 0.0738 (move point to the right 3 places)

10. **Multiplying** by 20, 30 and 500 etc...
    2.6 x 500 = 2.6 x 100 x 5 = 260 x 5 etc..

11. **Division** by 20, 30 and 500 etc....
    4795 ÷ 500 = 4795 ÷ 100 ÷ 5 = 47.95 ÷ 5 = 9.99

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Topic 3 – Money (Chapter 4)

1. **Mixed Money Problems**
   Bills and costs

2. **Foreign Currency**

   £'s to euro, dollars etc....
   (Multiplying by the exchange rate)

3. **Converting back.**

   Euro, dollars etc...to £'s (Divide by exchange rate)

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E1   Test   (Topics 1 – 3) | % |

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Topic 4 – Statistics (Chapter 9)

1. **Mean and Range**
   Mean   Total of all values ÷ by number of values
   Range Highest – lowest

2. **Frequency Table** (Tally Table)
   Reading and Constructing

3. **Bar Charts**
   Reading and Constructing

4. **Line Graphs**
   Reading and Constructing

5. **Pie – Charts**
   Reading and Constructing

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Topic 5 – Time (Chapter 3)

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1. **Converting between 12 / 24 clock**
   7.30pm ⇨ 1930   2215 ⇨ 1015pm

2. **Time Intervals**
   Counting Method

3. **Interpreting Timetables**

4. **Minutes, Second and Decimals**

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Topic 6 – Negative Numbers (Chapter 5)

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1.   **Understand** – concept of +ve and –ve numbers

2.   **Simple up and down**
using thermometer

3.   **Use thermometer**
– to add / sub integers mentally

4.   **Coordinate Grid /(4 Quadrants)**

e.g.   (1,1) ,
(-2,3),
(-4,-5),
(6,-2)
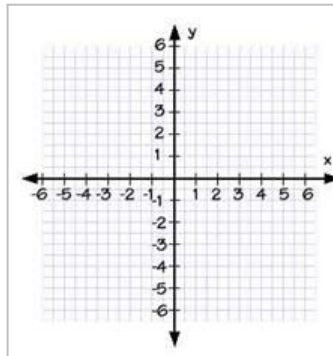
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Topic 7 – Scale Drawings (Chapter 17)

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1.   **Interpreting and using scales**

   1cm represents 300m

2.   **Simple Scale Drawing**

BASTROP STATE PARK
Bastrop, Texas
Contour interval: 5 meters
Scale: 1 / 15,000

3.   **Scale Drawing using a protractor.**
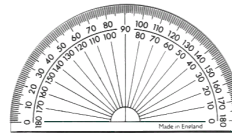
4.   **Bearings and Scale Drawings**

N

N

120°

45°

8km

12km

1cm represents 2km
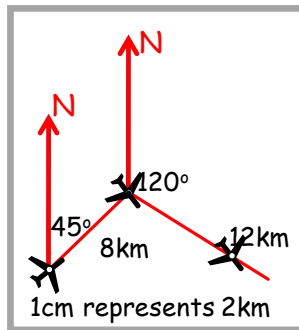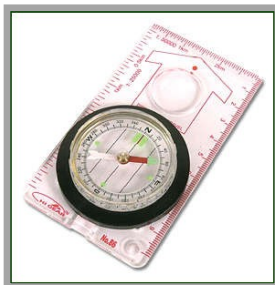
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Topic 8 – Solving Equations / Inequations (Chapter 8)

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1.   **Tidying up like terms**

$x + x + y + y + x = 3x + 2y$

2.   **Number Machine**
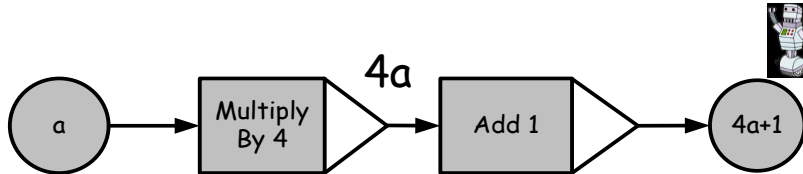
3.   **Evaluating an expression**

$a = 1$ $b = (-2)$ $c = 5$ $abc = 1 \times (-2) \times 5 = -10$

4.   **Solving Equations**
Balancing Method

$y + 2 = 10$

$2w = 8$

5.   **Solving Harder Equations of the type**

$2x + 5 = 11$
$2x = 6$
$x = 3$

6.   **Solving simple Inequalities**

$>$ greater than
$<$ less than
$\leq$ less than or equal to
$\geq$ greater than or equal to

7.   **Solving Inequalities**

$14x > 140$

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Topic 9 – Measurement (Chapter 10)

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1. **Length**

   Millimetres (mm)
   Centimetres (cm)
   Metres (m)
   Kilometres (km)

1			

2**.** **Perimeter**

   The outside of a shape

2			
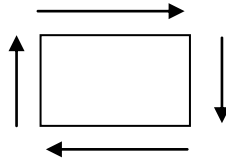
3. **Area of a Rectangle**

   B

   L
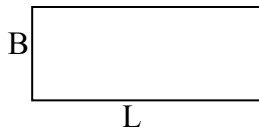
   $Area = Length \times Breadth$

3			

4. **Composite Area**

   Area that is made up from basic shapes

   A_1

   A_2

   $Area = A_1 + A_2$

4			
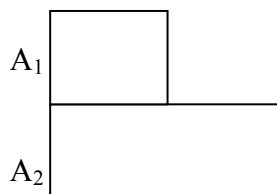
5. **Area of a RAT (Right-Angled Triangle)**

   h

   b
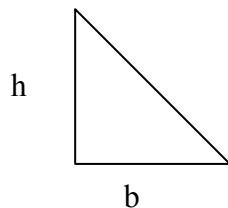
   $Area = \frac{1}{2} \times base \times height$
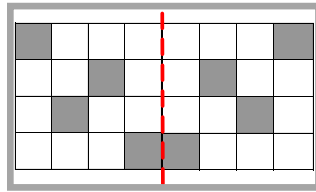
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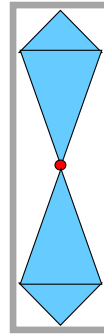Topic10 – Symmetry & Tiling (Chapter 7)

1. **Line / Reflection**
   Mirror image

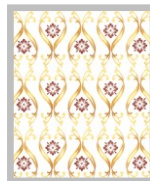2. **Rotational / Turn**

   Half turn, quarter turn etc.....

   Order of rotation 1, 2, 3, 4 etc...

3. **Creating Turn Symmetry**

4. **Translation / Glide / Slide**

   Wallpaper design etc....

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E2   Test (Topics 4 – 10)   %

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Topic 11 – Fraction & Percentages (Chapter 6)

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1. The term Fraction

$$\frac{\text{numerator}}{\text{denominator}} = \frac{4}{5}$$

2. Equivalent Fraction

$$\frac{3}{6} = \frac{3^{\div3}}{6^{\div3}} = \frac{1}{2}$$

3. Fraction of a Quantity

$$\frac{3}{4} \text{ of } 20 \quad 4\overline{)20}^{\,5} \quad 5 \times 3 = 15$$

4. The term Percentage

Out of a 100

$$\frac{4}{5} \rightarrow \quad 4 \div 5 \times 100 = 80\% \quad (80 \text{ out of } 100)$$

5. Finding a Percentage using a calculator

29% of £250

$$\frac{29}{100} \times 250 = £72.50$$

6. Finding a Percentage without a calculator

30% of 80
10% ⇨ 8
30% ⇨ 8×3 = 24

7. Common Percentages / Fractions

$$1\%, \quad 10\%, 20\%, 25\%, 50\%, 75\%$$
$$\frac{1}{100}, \frac{1}{10}, \frac{1}{5}, \frac{1}{4}, \frac{1}{2}, \frac{3}{4}$$

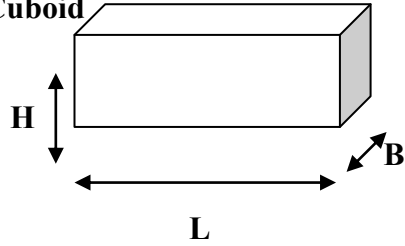| 1		
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Topic 12 – Volume (Chapter 16)

1. **Counting Cubes for Volume**

2. **Volume Cuboid**

H

B

L

$Volume = Length \times Breadth \times Height$

3. **Liquid Volume**

1 litre = 1000 ml = 1000cm^3

1ml = 1 cm^3

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Topic 13 – Linear Patterns (Chapter 11)

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1. Sequences

1, 2, 3, 5,8, 13 ....

2. Square & Triangular Numbers

1,4,9,25,36,49,64,81,100 ....

1, 3,6,10, 15, 21, 28 ....

3. Simple Linear Pattern Rule

g	0	1	2	3	4
C	0	5	10	15	20

Find the difference in C

C = 5 g

4. Complicated Linear Pattern Rule

a	1	2	3	4
b	3	5	7	9

Find the difference in b
Find the correction factor

b = 3a + 1

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Topic 14 – Angles (Chapter 12)

1. **Type of angles**

   Acute ,   Right-Angle ,   Obtuse , Straight ,   Reflex

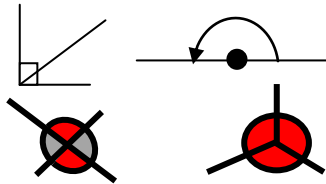2. **Naming Angles**

   Y

   Name is ∠ YBM
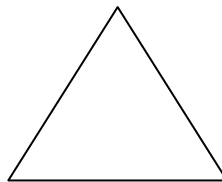
   B ——————— M
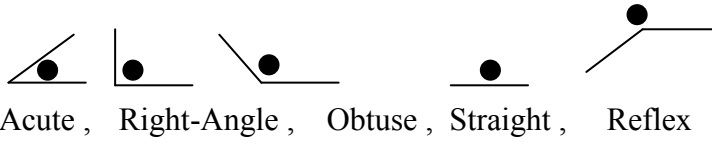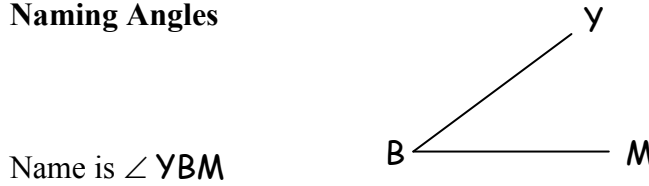
3. **Calculating missing angles.**

   Right angle 90°
   Straight line 180^0
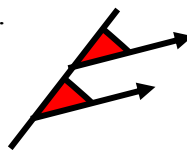   Opposite angles are equal
   Angle round a point 360°
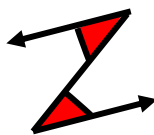
4. **Angles in a Triangle.**

   Adds up to 180°

5. **Corresponding Angles** (F-Angles)
   Corresponding angles are equal.

6. **Alternate Angles** (Z-angles)
   Alternate angles are equal

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Topic 15 – Triangles (Chapter 14)

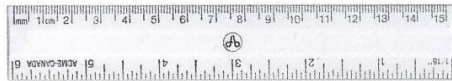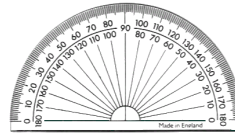| 1		
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1. Drawing SAS Triangles

SAS = Side   Angle   Side
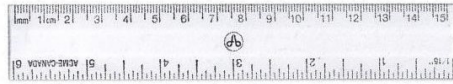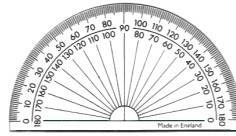
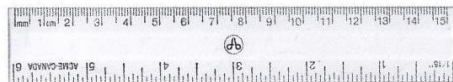**2. Drawing ASA Triangles**

ASA = Angle   Side   Angle

3. Drawing SSS Triangles

SSS = Side   Side   Side

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Topic 16 – Ratio (Chapter 15)

1. **Ratio** – used to compare different quantities

    2:3

2. **Simplifying Ratios** – (including Fractional Ratios)

    $6:24$
    $1:4$

    $\dfrac{1}{2}:3$
    $1:6$

3. **Ratio Calculations**

boys	girls
3	5
12	20

×4 (3 → 12   5 ×4 20

E3   Test (Topic 11 – 16)   [%   ]

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